



Faculté des sciences appliquées

FSA

INGI2346 **Conception d'applications réparties**

[30h+15h exercices] 4 credits

This course is taught in the 2nd semester

Teacher(s): Marc Lobelle (coord.), Peter Van Roy
Language: french
Level: 2nd cycle course

Aims

-To design distributed applications, in particular to define the application protocols for these applications. Distributed applications consist of software components cooperating through a network. The network may be hostile and the applications can run on computers of different types and using different operating systems.

Main themes

- Main classical programming models for distributed applications.
- Introduction to the theoretical background of distributed applications.

Content and teaching methods

- Introduction
- Low level programming model (socket interface)
- Client / server model (rpc, rmi, ζ interfaces) including security aspects
- Symmetrical programming model(PVM interface)
- Bases of theoretical background (concurrency and parallelism in access to information)

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

- Prerequisite:
 - (1) General knowledge in computer networking
 - (2) General knowledge in operating systems and ability to program in C on UNIX) (for instance LINF 1252, INGI 2113, INGI 2716)
- References :
 - (1) W.R. Stevens " UNIX Network Programming, vol 1 " Prentice Hall 1998
 - (2) Rpc Rmio Geist & al. " PVM : Parallel Virtual Machine " MIT Press 1994
- Assessment:

Written exam with the possibility to discuss the answers during the exam with the professor.

Other credits in programs

FSA3DS/IN	Diplôme d'études spécialisées en sciences appliquées (informatique)	(4 credits)
INFO21	Première année du programme conduisant au grade d'ingénieur civil informaticien	(4 credits)
INFO22	Deuxième année du programme conduisant au grade d'ingénieur civil informaticien	(4 credits)